

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

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November 15, 2011

02-Sis-96-0.0/77.3

02-2E2904

Project ID 0200000581

STP-P096(049)E

Addendum No. 3

Dear Contractor:

This addendum is being issued to the contract for CONSTRUCTION ON STATE HIGHWAY IN SISKIYOU COUNTY AT VARIOUS LOCATIONS FROM SALMON RIVER BRIDGE 02-0177 TO KLAMATH RIVER BRIDGE 02-0117.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on Wednesday, November 30, 2011.

This addendum is being issued to revise the Notice to Bidders and Special Provisions and the Federal Minimum Wages with Modification Number 33 dated 11/04/2011.

In the Special Provisions, Section 10-1.24, "EXISTING HIGHWAY FACILITIES," the following paragraph is added after the first paragraph.

"Attention is directed to Section 7-1.06, "Safety and Health Provisions," of the Standard Specifications. Work practices and worker health and safety shall conform to the California Division of Occupational Safety and Health Construction Safety Orders Title 8, of the California Code of Regulations including Section 5158, "Other Confined Space Operations.""

In the Special Provisions, Section 10-1.24, "EXISTING HIGHWAY FACILITIES," subsection "EXISTING PAINT SYSTEMS," is revised as attached.

In the Special Provisions, Section 10-1.075, "SCAFFOLDING," is added as attached.

To Bid book holders:

Inquiries or questions in regard to this addendum must be communicated as a bidder inquiry and must be made as noted in the Notice to Bidders section of the Notice to Bidders and Special Provisions.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the Bid book.

Submit bids in the Bid book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

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This addendum, attachments and the modified wage rates are available for the Contractors' download on the Web site:

http://www.dot.ca.gov/hq/esc/oe/project_ads_addenda/02/02-2E2904

If you are not a Bid book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,



JOHN BULINSKI
District Director

Attachments

EXISTING PAINT SYSTEMS

The existing paint systems:

- on Bridge Number 02-0177 consist of zinc primer paint and vinyl green finish paint applied when the bridge was built in 1974. This will be "Spot Blast Clean And Paint Undercoat (Location 1).
- on Bridge Number 02-0156 consist of basic lead silica chromate primer paint and green alkyd finish paint applied in 1970. This will be "Spot Blast Clean And Paint Undercoat (Location 2).
- on Bridge Number 02-0157 consist of basic lead silica chromate primer paint and green alkyd finish paint applied in 1970. This will be "Spot Blast Clean And Paint Undercoat (Location 3).
- on Bridge Number 02- 0035 consist of red lead primer paint and green alkyd finish paint applied in 1965-66. This will be "Spot Blast Clean And Paint Undercoat (Location 4).
- on Bridge Number 02-0117 consist of red lead primer paint and aluminum finish paints applied in 1952-53. Waterborne primers and waterborne aluminum finish paint applied in 1989. This will be "Spot Blast Clean And Paint Undercoat (Location 6).

The grime and debris on the existing paint must be considered part of the paint system and must conform to the same requirements for the existing paint system specified in this section. Any work that disturbs the existing paint system will expose workers to health hazards and will (1) produce debris containing heavy metal in amounts that exceed the thresholds established in Titles 8 and 22 of the California Code of Regulations or (2) produce toxic fumes when heated. The grime and debris on the bridge may also contain lead. Consider the grime and debris part of the paint system. All debris produced when the existing paint system is disturbed must be contained.

Debris Containment and Collection Program

Prior to starting work, the Contractor must submit a debris containment and collection program to the Engineer in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications, for debris produced when the existing paint system is disturbed. The program must identify materials, equipment, and methods to be used when the existing paint system is disturbed and must include working drawings of containment systems, loads applied to the bridge by containment structures, provisions for ventilation and air movement for visibility and worker safety, name and address of analytical lab that will perform the analyses, CA Department of Toxic Substances Control registration certificate and documentation of compliance with the CA Highway Patrol Biennial Inspection of Terminals Program of the hazardous waste hauler that will transport the hazardous waste, and the name and address of the disposal site that will accept the hazardous waste residue.

If the measures being taken by the Contractor are inadequate to provide for the containment and collection of debris produced when the existing paint system is disturbed, the Engineer will direct the Contractor to revise the operations and the debris containment and collection program. The directions will be in writing and will specify the items of work for which the Contractor's debris containment and collection program is inadequate. No further work must be performed on the items until the debris containment and collection program is adequate and, if required, a revised program has been approved for the containment and collection of debris produced when the existing paint system is disturbed.

The Engineer will notify the Contractor of the approval or rejection of the submitted or revised debris containment and collection program within 2 weeks of submittal of the Contractor's program or revised program.

The State will not be liable to the Contractor for failure to approve all or any portion of an originally submitted or revised debris containment and collection program, nor for delays to the work due to the Contractor's failure to submit an acceptable program.

Full compensation for the debris containment and collection program must be considered as included in the contract price paid for the item of work causing the existing paint system to be disturbed, and no additional compensation will be allowed therefor.

Safety and Health Provisions

Attention is directed to Section 7-1.06, "Safety and Health Provisions," of the Standard Specifications. Work practices and worker health and safety must conform to the California Code of Regulations, Title 8, Construction Safety Orders, including Section 1532.1, "Lead."

The Contractor must furnish the Engineer a written Code of Safe Practices and must implement an Injury and Illness Prevention Program and a Hazard Communication Program in conformance with the requirements of Construction Safety Orders, Sections 1509 and 1510.

Attention is directed to Section 7-1.07, "Lead Compliance Plan" of the Standard Specifications. Work practices and worker health and safety shall conform to the California Code of Regulations, Title 8, Construction Safety Orders, including Section 1532.1, "Lead."

The Contractor must furnish the Engineer a Lead Compliance Plan and must implement an Injury and Illness Prevention Program and a Hazard Communication Program in conformance with the requirements of Construction Safety Orders, Sections 1509 and 1510.

Prior to starting work that disturbs the existing paint system, and when revisions to the compliance program are required submit a lead compliance plan under Section 7-1.07, "Lead Compliance Plan," of the Standard Specifications. Copies of all air monitoring or jobsite inspection reports made by or under the direction of the CIH in conformance with Section 1532.1, "Lead," must be furnished to the Engineer within 10 days after the date of monitoring or inspection.

Prior to performing work in areas containing lead, personnel who have no prior training, including state personnel, must complete a safety training program provided by the Contractor that meets the requirements of Title 8, California Code of Regulations, Section 1532.1, "Lead" Compliance Plan. Training required by the Contractor's Lead Compliance Plan must be supplied to State personnel by the Contractor. The number of State personnel will be 5.

Full compensation for furnishing the Engineer with the submittals and for implementing the programs required by this safety and health section must be considered as included in the contract price paid for the item of work causing the existing paint system to be disturbed, and no additional compensation will be allowed therefor.

Full compensation for furnishing the Engineer with the submittals and for implementing the programs required by this section must be considered as included in the contract price paid for the item of work causing the existing paint system to be disturbed, and no additional compensation will be allowed therefore.

Debris Handling

Debris produced when the existing paint system is disturbed must not be temporarily stored on the ground. Debris accumulated inside the containment system must be removed before the end of each work shift. Debris must be stored in metal containers approved by the U.S Department of Transportation for the transportation and temporary storage of hazardous waste. The containers must be handled such that no spillage occurs. The containers must be stored in a secured enclosure. Acceptable secure enclosures include a locked chain link fenced area or a lockable shipping container located within the project limits until disposal as approved.

Handling, storing, transporting, and disposing of debris produced when the existing paint system is disturbed must be performed in conformance with all applicable Federal, State, and local hazardous waste laws. Laws that govern this work include:

1. Health and Safety Code, Division 20, Chapter 6.5 (California Hazardous Waste Control Act).
2. Title 22; California Code of Regulations, Division 4.5, (Environmental Health Standards for the Management of Hazardous Waste).
3. Title 8, California Code of Regulations.

The Contractor must make necessary arrangements to test the debris as required by the disposal facility and as specified. Testing must include at a minimum:

1. Total Lead by US EPA Method 6010C
2. Soluble Lead by CA WET
3. Soluble Lead by Toxicity Characteristic Leaching Procedure (TCLP)

From the first 220 gal of hazardous waste or portion thereof if less than 220 gal of hazardous waste are produced, a minimum of 4 randomly selected samples must be taken and analyzed individually. Samples must not be composited. From each additional 880 gal of hazardous waste or portion thereof if less than 880 gal are produced, a minimum of 1 additional random sample must be taken and analyzed. Use chain of custody procedures consistent with Chapter 9 of the US EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846) while transporting samples from the project to the laboratory. Each sample must be homogenized before analysis by the laboratory performing the analyses. A sample aliquot sufficient to cover the amount necessary for the total and the soluble analyses must then be taken. This aliquot must be homogenized a second time and the total and soluble analyses run on this aliquot. The homogenization process must not include grinding of the samples. Submit the name and location of the disposal facility that will be accepting the hazardous waste and the analytical laboratory along with the testing requirements not less than 5 business days before the start of the work that disturbs the existing paint system. The analytical laboratory must be certified by the CDPH ELAP for all analyses to be performed.

Submit analytical test results of the debris, including chain of custody documentation, for review and acceptance before:

1. Requesting the Engineer's signature on the waste profile requested by the disposal facility
2. Requesting the Engineer obtain a US EPA Generator Identification Number for disposal
3. Removing the residue from the site

Submit a request for the US EPA Generator Identification Number when the Engineer accepts the waste characterization analytical test results documenting that the debris is a hazardous waste.

Except as otherwise provided herein, debris produced when the existing paint system is disturbed must be disposed of by the Contractor at an approved California Department of Toxic Substances Control permitted Class 1 disposal facility within California in conformance with the requirements of the disposal facility operator. The Engineer will obtain the US EPA Generator Identification Number and will sign all manifests as the generator within 2 business days of receiving and accepting the waste characterization analytical test results and receiving your request for the US EPA Generator Identification Number. Disposal must occur after the Engineer accepts the waste characterization analytical test results and within 30 days after accumulating 220 pounds of residue and dust.

If less than 220 pounds of hazardous waste debris is generated in total, dispose of it within 30 days after the start of accumulation of the debris.

The debris must be hauled by a transporter currently registered with the California Department of Toxic Substances Control and in compliance with the CA Highway Patrol Biennial Inspection of Terminals Program using correct manifesting procedures. The Contractor must make all arrangements with the operator of the disposal facility and perform any testing of the debris required by the operator.

If analytical test results demonstrate that the residue is a non-hazardous waste and the Engineer agrees, dispose of the residue at an appropriately permitted Class II or Class III facility or recycle it.

At the option of the Contractor, the debris produced when the existing paint system is disturbed may be disposed of by the Contractor at a facility equipped to recycle the debris, subject to the following requirements:

1. Copper slag abrasive blended by the supplier with a calcium silicate compound must be used for blast cleaning.
2. The debris produced when the existing paint system is disturbed must be tested by the Contractor to confirm that the solubility of the heavy metals is below regulatory limits and that the debris may be transported to the recycling facility as a nonhazardous waste.
3. The Contractor must make all arrangements with the operator of the recycling facility and perform any testing of the debris produced when the existing paint system is disturbed that is required by the operator.

Submit receiving landfill or recycling facility documentation of proper disposal within 5 business days of debris transport from the project.

Full compensation for debris handling and disposal must be considered as included in the contract price paid for the item of work causing the existing paint system to be disturbed, and no additional compensation will be allowed therefor.

If analytical test results demonstrate that the debris is a non-hazardous waste, the Engineer agrees, and debris is disposed of at an appropriately permitted Class II, Class III, or recycling facility, the Department does not adjust payment.

Work Area Monitoring

The Contractor must perform work area monitoring of the ambient air and soil in and around the work area at the bridge site to verify the effectiveness of the containment system. The work area monitoring must consist of collecting, analyzing, and reporting air and soil test results and recommending the required corrective action when specified exposure levels are exceeded. The work area monitoring must be carried out under the direction of a CIH. The samples must be collected at locations designated by the Engineer.

Air samples must be collected and analyzed in conformance with National Institute for Occupational Safety and Health (NIOSH) methods. Air samples for lead detection must be collected and analyzed in conformance with NIOSH Method 7082, with a limit of detection of at least $0.05 \mu\text{g}/\text{m}^3$. Air samples for detection of other metals must be collected and analyzed in conformance with NIOSH Method 7300, with a limit of detection of at least one percent of the appropriate Permissible Exposure Limits (PELs) specified by the California/Occupational Safety and Health Administration (Cal/OSHA). Alternative methods of sample collection and analysis, with equivalent limits of detection, may be used at the option of the Contractor.

The airborne metals exposure, outside either the containment system or work areas, must not exceed the lower of: (1) An average of $1.5 \mu\text{g}/\text{m}^3$ of air per day and $0.15 \mu\text{g}/\text{m}^3$ per day on a rolling 90-day basis. Calculate average daily concentrations based on monitoring to date, and projection based on those monitoring trends for the next 90 days or to the end of work subject to the lead compliance plan if less than the specified averaging period, (2) 10 percent of the Action Level specified for lead by Section 1532.1, "Lead," of the Construction Safety Orders; (3) 10 percent of the appropriate PELs specified for other metals by Cal/OSHA.

The air samples must be collected daily during work that disturbs the existing paint system. All air samples must be analyzed within 48 hours at a facility accredited by the Environmental Lead Laboratory Accreditation Program of the American Industrial Hygiene Association (AIHA). If airborne metal concentrations exceed the allowable levels, modify the work or containment system to prevent further release of metals. When corrective action is recommended by the CIH, additional samples may be required by the Engineer to be taken, at the Contractor's expense.

4 soil samples per bridge must be collected prior to the start of work, and 4 soil samples per bridge must be collected within 36 hours following completion of cleaning operations of existing steel. A soil sample must consist of 5 plugs, each $3/4$ inch in diameter and $1/2$ inch deep, taken at each corner and center of a 1 square yard area. Soil samples must be analyzed for total 40 in conformance with US EPA Method 6010C or US EPA Method 7000 series and soluble lead by California Waste Extraction Test (CA WET). The analytical laboratory performing the analyses must be certified by the California Department of Public Health (CDPH) Environmental Laboratory Accreditation Program (ELAP) for all analyses to be performed.

There must be no increase in the concentrations of heavy metal in the soil in the area affected when the existing paint system is disturbed. When soil sampling, after completion of work that disturbs the existing paint system, shows an increase in the concentrations of heavy metal, the area affected must be cleaned and resampled at the Contractor's expense until soil sampling and testing shows concentrations of heavy metal less than or equal to the concentrations collected prior to the start of work.

In areas where there is no exposed soil, there must be no visible increase in the concentrations of heavy metal on the area affected when the existing paint system is disturbed. Any visible increase in the concentrations of heavy metal, after completion of work that disturbs the existing paint system, must be removed at the Contractor's expense.

Air and soil sample laboratory analysis results, including results of additional samples taken after corrective action as recommended by the CIH, must be submitted to the Engineer. The results must be submitted both verbally within 48 hours after sampling and in writing with a copy to the Contractor, within 5 days after sampling. Sample analysis reports must be prepared by the CIH as follows:

1. For both air and soil sample laboratory analysis results, the date and location of sample collection, sample number, contract number, bridge number, full name of the structure as shown on the contract plans, District-County-Route-Post mile, name and location of the certified laboratory that performed the analysis, and chain of custody forms will be required.
2. For air sample laboratory analysis results, the following will be required:
 - 2.1. List of emission control measures in place when air samples were taken.
 - 2.2. Air sample results must be compared to the appropriate PELs.
 - 2.3. Corrective action recommended by the CIH to ensure airborne metals exposure, outside either the containment system or work areas, is within specified limits.
 - 2.4. Signature of the CIH who reviewed the data and made recommendations.
3. For soil sample laboratory analysis results, the concentrations of heavy metal expressed as mg/kg and mg/L will be required.

If containment measures being taken are inadequate to provide for the containment and collection of debris produced when the existing paint system is disturbed, the Engineer will direct the Contractor to revise the operations and the debris containment and collection program. The directions will be in writing and will specify the items of work for which the debris containment and collection program is inadequate. No further work must be performed on the items until:

1. Debris containment and collection program is adequate.
2. If required, a revised program has been authorized for the containment and collection of debris produced when the existing paint system is disturbed.
3. Released material has been cleaned up and contained

Work area monitoring will be paid for on the basis of a lump sum price.

The contract lump sum price paid for work area monitoring must include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in collecting and analyzing samples of ambient air and soil for heavy metals, complete in place, including reporting the test results, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Containment System

Use a Class I containment system as defined in Technology Guide 6, "Guide for Containing Surface Preparation Debris Generated During Paint Removal Operations," of the "SSPC: The Society for Protective Coatings." The containment system must contain all water, resulting debris, and visible dust produced when the existing paint system is disturbed.

The containment system must provide the clearances specified under "Maintaining Traffic" of these special provisions, except that when no clearances are specified a vertical clearance of 16 feet and a horizontal clearance of 32 feet must be provided for the passage of public traffic.

Scaffolding or supports for the ventilated containment structure must not extend below the vertical clearance level nor to the ground line at locations within the roadbed.

The ventilated containment structure must conform to "Scaffolding" of these special provisions.

The minimum total design load of the ventilated containment structure must consist of the greater of either:

1. Scaffolding capacity requirement as specified in Section 1926.451(a)(1) of the Construction Safety Orders.
2. Sum of the dead and live vertical loads. The dead load must consist of the actual load of the ventilated containment structure. Live loads must consist of a uniform load of not less than 45 psf, which includes 20 psf of sand load, applied over the area supported, and in addition, a moving 1,000-pound concentrated load must be applied to produce maximum stress in the main supporting elements. Assumed horizontal loads need not be included in the design of the ventilated containment structure.

Connections of the containment structure to the existing structure must be made through the deck, girder, stringer, or floor beam system. No connections are allowed that may cause bending stresses in a truss member.

Flexible materials must be supported and fastened to prevent escape of abrasive and blast materials due to whipping from traffic or wind and to maintain clearances.

The ventilation system in the ventilated containment structure must be of the forced input airflow type with fans or blowers.

Negative air pressure must be employed within the ventilated containment structure and will be verified by visual methods by observing the concave nature of the containment materials while taking into account wind effects or by using smoke or other visible means to observe airflow. The input airflow must be properly balanced with the exhaust capacity throughout the range of operations.

The exhaust airflow of the ventilation system in the ventilated containment structure must be forced into dust collectors (wet or dry) or bag houses.

The ventilated containment structure must be properly maintained while work is in progress and must not be changed from the approved working drawings without prior approval of the Engineer.

Full compensation for the containment system must be considered as included in the contract price paid for the item of work causing the existing paint system to be disturbed, and no additional compensation will be allowed therefor.

Protective Work Clothing and Hygiene Facilities

Wherever there is exposure or possible exposure to heavy metals or silica dust at the bridge site, the Contractor must, for State personnel: (1) furnish, clean, and replace protective work clothing and (2) provide access to hygiene facilities. The furnishing, cleaning, and replacement of protective work clothing and providing access to hygiene facilities must conform to the provisions of subsections (g), "Protective work clothing and equipment," and (i), "Hygiene facilities and practices," of Section 1532.1, "Lead," of the Construction Safety Orders, and will be required for no more than 5 people.

The protective work clothing and access to hygiene facilities must be provided during exposure or possible exposure to heavy metals or silica dust at the bridge site and during the application of the undercoats of paint.

Protective work clothing and washing facilities must be inspected and approved by the Engineer before the start of any activity that presents the potential for lead exposure.

The protective work clothing must remain the property of the Contractor at the completion of the contract.

Full compensation for protective work clothing and access to washing facilities for State personnel must be considered as included in the contract price paid for the item of work causing the existing paint system to be disturbed, and no additional compensation will be allowed therefor.

10-1.075 SCAFFOLDING

Scaffolding shall be defined in accordance with and must conform to the Construction Safety Orders of the Division of Occupational Safety and Health and these special provisions.

If scaffolding is constructed over traffic, on a bridge structure, or within a distance equal to the scaffold height plus 6 feet from the edge of a traveled way open to traffic, the Contractor must submit to the Engineer working drawings and supporting calculations for scaffolding systems in conformance with Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications and these special provisions.

Scaffolding working drawings must include the following:

1. Descriptions, calculations, and values for all loads anticipated during erection, use, and removal of the scaffolding.
2. Methods and equipment for erecting, moving, and removing the scaffolding.
3. Design details including bolt layouts, welding details, and any connections to existing structures.
4. Stress sheets including a summary of computed stresses in the (1) scaffolding, (2) connections between scaffolding and any existing structures, and (3) existing load supporting members. The computed stresses must include the effects of erection, movement, and removal of the scaffolding.

For scaffolding suspended from a bridge structure, calculations must include the following:

1. Moment and shear demands during erection, movement, and removal of the scaffolding on the longitudinal girders of girder bridges and the flooring system of stringers and floor beams of truss bridges
2. Tension and compression stresses of members of truss bridges during erection, movement, and removal of the scaffolding

If manufactured scaffolding is used, the manufacturer's name, address, and telephone number must be shown on the working drawings.

The working drawings must be stamped and signed by an engineer who is registered as a Civil Engineer in the State of California. In addition, before submitting the working drawings to the Engineer, the working drawings must be stamped and signed by an independent reviewer who is registered as a Civil Engineer in the State of California. The independent reviewer must not be employed by the same entity preparing the working drawings.

The Contractor must allow 15 days for the review of a complete submittal for scaffolding working drawings.

Welding for the manufacturing and erection of scaffolding must conform to the requirements in AWS D1.1 for steel and AWS D1.2 for aluminum.

For scaffolding suspended from a bridge structure:

1. Additional load capacities and design live loads are shown in the following table. Additional capacity is based on a uniformly loaded condition across the entire bridge width.

Bridge No.	Additional Load Capacity (lbs/sq ft)	Bridge Width (ft)	Design Live Load
02-0177	35	34	HS20
02-0156	65	34	5- axle Permit
02-0157	65	34	13- axle Permit
02-0035	35	34'-10"	HS12
02-0117	90	29'3"	HS20

2. Scaffolding loads must not exceed the load-carrying capacity of the existing members as determined in conformance with Caltrans Bridge Design Specifications, Load Factor Design Version, April 2000. Use the group load factors shown in the following table:

Group	Gamma Factor	Beta Factors		
		D	(L+I)H	(L+I)P
I_H^a	1.3	1	1	0
I_{PC}^b	1.3	1	0	1
I_{PW}^c	1.3	1	1	1.15

^a H denotes HS-20 loads

^b PC denotes P loads on closely-spaced girders

^c PW denotes P loads on widely-spaced girders

3. For truss-type bridges, all connections must be made through stringers, floor beams, or truss panel points and no connections are allowed that may cause bending stresses in a truss member.

Full compensation for conforming to the above requirements is considered as included in the contract prices paid for the various items of work involving scaffolding and no additional compensation will be allowed therefor.